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**STATEMENT OF WORK
FOR
REMEDIAL ACTION**

**WEST LAKE LANDFILL SITE
OPERABLE UNIT 2
BRIDGETON, MISSOURI**

I. PURPOSE

The purpose of this Statement of Work (SOW) is to set forth the framework and requirements for implementing the Remedial Action (RA) and Operation and Maintenance (O&M) for the remedy in accordance with the Remedial Design (RD). The Record of Decision (ROD) issued on July 25, 2008 defines the selected remedy for the West Lake Landfill Site, Operable Unit 2 (OU2). This SOW is incorporated into and made a part of the Consent Decree (CD) entered into by the Settling Defendant and the United States Environmental Protection Agency Region VII (EPA) for the RA for OU2. The Settling Defendant shall follow the ROD, the CD, the approved RD Work Plan, the approved Remedial Design (RD), the RA Work Plan (RAWP), and the most recent revisions of appropriate EPA guidance in submitting deliverables for and implementing the RA at OU2.

On _____ 2008, the EPA and the Settling Defendants entered into Third Amendment to the Administrative Settlement Agreement and Order on Consent (AOC) for the performance of the RD for OU2. The RD was approved by EPA on _____. The RD is presented in the report entitled *Final Remedial Design Report for the West Lake Landfill Site OU2, Bridgeton, Missouri*, prepared by _____, dated _____. The RD, in conjunction with this SOW, establishes the work necessary to implement the RA.

A. Remedial Action (RA)

The RA is the construction and implementation phase of site remediation, including the implementation of monitoring systems and institutional controls. The RA process begins with preparation of the RA Work Plan (RAWP) which sets forth plans and schedules for the implementation of the remedy. The RA process ends when the construction and implementation is complete and EPA determines that the remedy is operational and functional.

B. Operation and Maintenance (O&M)

O&M begins with implementation of the remedy and continues after construction has been completed. O&M is intended to maintain the effectiveness of the RA and provide compliance confirmation. O&M is maintained for as long as the remedy remains in place. O&M activities include inspection and maintenance, ground water monitoring, maintenance and enforcement of use restrictions, and preparation and submission of reports on monitoring, inspection and maintenance activities. O&M activities may be modified or optimized based on experience or new information. Proposed modifications shall be submitted to EPA for review and approval consistent with the CD and the process provided for in the approved O&M plans.

II. DESCRIPTION OF THE REMEDIAL ACTION ACTIVITIES

The Respondent shall conduct the RA process to implement the Selected Remedy identified in the OU2 ROD. The remedy will meet the performance standards, criteria and specifications set forth in the OU2 ROD, the approved RD report, this SOW and the CD, unless subsequently modified in accordance with the procedures set forth in the CD. The performance standards, criteria and specifications include the substantive requirements set forth in applicable or relevant and appropriate requirements (ARARs) identified in Section 13.2 of the ROD.

The remedy for OU2 was developed to protect human health and the environment by providing source control for the landfilled waste materials. The source control methods prevent human receptors from contacting the waste material and control contaminant migration to air or groundwater.

1. Landfill Cap: Install landfill cover system to control and minimize the migration of contaminants from the Inactive Sanitary Landfill and prevent direct contact with landfilled wastes.
2. Groundwater Monitoring: Implement long-term groundwater monitoring program to demonstrate groundwater protection.
3. Institutional Controls: Implement land use restrictions to ensure future uses do not impact the effectiveness or the integrity of the remedy.
4. Surveillance and Maintenance: Implement periodic inspection and maintenance program for all components of the remedy.

III. KEY PERSONNEL

A. Designation of Project Coordinator

The Settling Defendant identified the Project Coordinators as _____ pursuant to Section XII (Project Coordinators) of the CD. The Project Coordinators shall be responsible for the overall coordination and management of the activities required under the CD.

B. Review and Approval of Supervising Contractor

The Settling Defendant shall propose a Supervising Contractor pursuant to Section VI (Performance of the Work by Settling Defendants) of the CD. The Supervising Contractor shall be a professional with landfill experience. The Supervising Contractor may assume the role(s) of Project Coordinator, RA Constructor, and Quality Assurance Official with the following exception: the Supervising Contractor shall not assume both the role of RA Constructor and Quality Assurance Official. The Settling Defendant shall demonstrate to EPA the proposed Supervising Contractor's professional reputation; professional registration; landfill related experience and qualifications; capacity in professional, technical, and support staff to accomplish the project within the required schedule; and sufficient business background and financial resources to provide uninterrupted services throughout the life of the project.

The information submitted concerning the Settling Defendant's Supervising Contractor shall include a written statement of qualifications in sufficient detail to allow EPA and the State to make a full and timely evaluation. EPA may require that Settling Defendant meet with EPA to discuss the performance and capabilities of their Supervising Contractor. If EPA notifies Settling Defendant that the performance of the Supervising Contractor is not satisfactory, the Settling Defendant shall take action to correct the deficiency. If performance of the Supervising Contractor continues to be deficient, the Settling Defendant, at EPA request, will retain the services of a new Supervising Contractor.

C. Review and Approval of the Quality Assurance Official

Settling Defendant shall submit, in the RAWP, the name, title, and qualifications of the proposed Quality Assurance Official ("QAO"). The Settling Defendant's QAO shall be subject to disapproval by EPA. The Settling Defendant's QAO is required to be independent and autonomous from the RA contractor(s). The QAO may come from within the ranks of the Settling Defendant's own staff or through a contractual relationship with a private consulting entity. The Settling Defendant shall demonstrate to EPA the proposed QAO's professional reputation and design/construction experience and qualifications specifically required for the project.

Oversight by the Settling Defendant's QAO shall provide confirmation/assurance to the Settling Defendant and EPA that the RA is constructed to meet project requirements. The Settling Defendant's QAO shall implement the Construction Quality Assurance Plan (CQAP) by selectively testing and inspecting the work of the Settling Defendant's RA contractors.

IV. SCOPE OF THE REMEDIAL ACTION

The Settling Defendant shall provide the personnel, materials and equipment required to completely implement the RA.

A. Remedial Action Work Plan

Pursuant to Section VI of the CD, the Settling Defendant shall submit, within 30 days after the entry of the CD, a Draft RAWP for EPA review in consultation with the State. The Draft RAWP shall describe the Settling Defendant's plan for implementation of the RA and subsequent O&M within the terms and conditions of the CD, this SOW, and the RD. The Settling Defendant shall submit the revised RAWP according to the schedule identified in the Submission Schedule. The Settling Defendant's draft and revised RAWP shall contain, at a minimum, the following:

1. Names, titles, qualifications, and project responsibilities of the proposed RA Contractor(s) and QAO;
2. Identification of the RA project organization for both the construction and O&M phases of the RA, including an organization chart, duties of key personnel and contractors, and lines of authority;
3. Description of the execution plan for RA construction, including a detailed construction

schedule;

4. Health and Safety Plan for the RA construction and O&M phases of the Work;
5. Discussion of the deliverables to be submitted during the RA and subsequent O&M;
6. Quality Assurance Project Plan ("QAPP") for all sample collection and data analyses in accordance with Section VIII of the CD. The plan shall address all sampling activities addressed in the O&M Plan, including groundwater sampling and compliance monitoring plans;
7. Revisions to any previously prepared plans including the following:
 - a. Construction Quality Assurance Plan
 - b. Operations and Maintenance Plan
 - c. Field Sampling Plan(s)
 - d. Contingency Plan
 - e. Permitting Compliance Plan;
8. Implementation Strategy discussing the methods for achieving and integrating the required activities; and,
9. Requirements for RA Close-out and Completion of the Work in accordance with Section XIV of the CD and provisions of this SOW.

B. REMEDIAL ACTION CONSTRUCTION

The Settling Defendant shall implement the RA construction as detailed in the RD. The Settling Defendant shall complete the following activities in constructing the RA.

1. Pre-construction Conference

Prior to the start of construction, the Settling Defendant shall schedule and initiate a Pre-construction Conference. The participants will include Settling Defendant; all parties involved in the construction, including the Project Coordinator, the QAO, supervisors from each of the RA contractors; EPA Remedial Project Manager and any EPA designated Oversight Officials; appropriate local officials; and, representatives of the State. The purpose of the preconstruction conference is to:

- a. Establish lines of communication and authority among all parties involved in the RA;
- b. Describe RA activities;
- c. Review project schedule;

- d. Review methods for documenting and reporting inspection and testing data;
- e. Review methods for distributing and storing documents and reports;
- f. Review work area security and safety protocol; and,
- g. Discuss how scope changes that may occur during the RA will be handled.

The preconstruction conference shall be documented by the Settling Defendant's Project Coordinator or his/her designee. **Pre-construction Conference Minutes** shall be transmitted by the Settling Defendant's Project Coordinator to all parties within 14 days of the conference. The pre-construction conference minutes shall include, but need not be limited to: a list of meeting participants; a brief summary of significant issues discussed at the meeting and their resolution; a discussion of unresolved issues and a proposed process and schedule for their resolution; any other action items identified during the meeting with a proposed schedule for their completion; and an updated construction schedule.

2. Construction Oversight

In accordance with Section IX of the CD, the Settling Defendant shall provide access for EPA, the State, their contractors and their representatives to all other property and facilities where access is required to monitor compliance with the CD. Settling Defendant shall notify EPA and the State four weeks prior to sampling and monitoring activities, unless otherwise agreed. EPA and the State shall be notified as early as practicable and at least one working day prior to significant on-site activities. Such notification may be oral or included within progress reports submitted in accordance with the CD. EPA may collect split samples for Quality Assurance or verification purposes.

3. Pre-final Inspection

Upon preliminary construction completion, the Settling Defendant shall notify EPA and the State for the purposes of conducting a pre-final inspection. The pre-final inspection shall consist of a walk-through inspection of the Site. The purpose of the inspection is to determine whether the project is complete and consistent with the RD. Any outstanding construction items discovered during the inspection shall be identified and noted by Settling Defendant. The Settling Defendant shall certify that the physical components of the remedy including the cap, drainage systems and monitoring network have been installed satisfactorily to meet the purpose and intent of the specifications. The Settling Defendant shall retest where deficiencies are revealed.

The Settling Defendant shall submit a **Pre-final Inspection Report** within 30 days after the pre-final inspection. The Pre-final Inspection Report shall outline the outstanding construction items, actions required to resolve these items, completion date for resolution of these items, and the final inspection, if required.

If no significant deficiencies are noted during the pre-final inspection and if EPA determines that the landfill cap and drainage system is operational and that O&M activities may commence, EPA

may waive the requirement for a Final Inspection through a written statement. A Remedial Action Report, as discussed below, shall be required within 30 days of the Settling Defendant's receipt of EPA's waiver.

4. Final Inspection

Upon completion of any outstanding construction items and any required reinstallations, the Settling Defendant shall notify EPA and the State for the purposes of conducting a final inspection. The final inspection shall consist of a walk-through inspection of the Site. The Settling Defendant's Pre-final Inspection Report shall be used as a checklist, with the final inspection focusing on the outstanding construction items identified in the pre-final inspection. Confirmation shall be made that outstanding items have been resolved. Settling Defendant shall provide the results of the final inspection in a **Final Inspection Report**.

5. Construction Completion Reporting

Within 30 days after a final inspection or receipt from EPA of a waiver from final inspection, Settling Defendant shall submit a **Remedial Action Report**. In the report, a registered professional engineer and the Settling Defendant's Project Coordinator shall certify that the RA has been constructed in accordance with the RD plans and specifications.

The Settling Work Defendant's **Remedial Action Report** shall include, but need not be limited to:

- a. Description of the work performed; as-built drawings, specifications and sketches, signed and stamped by a professional engineer;
- b. Brief description of any outstanding construction items identified in the pre-final inspection and a description of how those items were resolved;
- c. Description of any modification orders and non-conformance reports;
- d. Copy of all permits required to construct and implement the RA;
- e. Copy of all Quality Assurance documentation required by the CQAP including field notebooks, well logs, inspection reports, test reports, and photographs;
- f. Documentation of the pre-final and final inspection;
- g. Highlights of the O&M Plan, including potential problems/concerns;
- h. Summary of Project Costs; and,
- i. The following certification, signed by a responsible corporate official of Settling Defendant or the Settling Defendant's Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

6. Progress Reports

In accordance with Section X of the CD, beginning on the 10th day of the month in which construction begins and continuing through the first six months of operation, Settling Defendant shall submit Progress Reports to EPA. Following the six month period of operation, Settling Defendant shall submit Progress Reports on a quarterly basis until such time as they submit the Completion of Remedial Action Certification Report. Progress Reports shall include, but need not be limited to:

- a. Information required to meet the reporting requirements set forth in Section XI of the CD;
- b. Percentage of work completed in construction of the RA;
- c. Summary of analytical results obtained including ground water level measurements and water sampling results;
- d. Discussion of any problems encountered and corrective action taken or recommended; and,
- e. Quality assurance and data verification information.

C. OPERATION AND MAINTENANCE

1. O&M Activities

The Settling Defendant shall operate and maintain the landfill cap system in accordance with the O&M Plan and associated monitoring plans until initiating RA Close-Out activities in accordance with this SOW (RA Close-Out) and Section XIV of the CD. EPA may determine that modifications to the O&M Plan and monitoring plans are required because of unanticipated conditions or experience gained during the O&M phase. If such modifications are required, EPA will notify the Settling Defendant of the required modifications, the effective date of such modifications, and any required revisions to these plans. Settling Defendant may also propose appropriate changes to the O&M Plan and monitoring plans in accordance with Section IX of the CD (EPA approval of Plans and Other Submissions). Settling Defendant shall revise the plans according to the required or approved modifications.

2. O&M Oversight

In accordance with Section IX of the CD, the Settling Defendant shall be responsible for assuring access for EPA, the State, and their contractors to perform oversight of the work required by the CD. EPA may collect split samples for Quality Assurance and sample verification purposes.

D. COMPLETION OF WORK

Work at the Site shall be considered complete when the Settling Defendant has completed all activities associated with the Selected Remedy that are required to attain and maintain the protection of human health and the environment, including all O&M activities.

3. Completion of Remedial Action Certification

Within 90 days after Settling Defendant concludes that all phases of the RA and O&M have been fully performed, Settling Defendant shall schedule a pre-certification inspection with EPA as specified in Section XIV, Paragraph 52 of the CD. Settling Defendant shall invite EPA Oversight Officials and the other agencies with a jurisdictional interest in attendance (e.g., state and local officials) to participate in the inspection. EPA will assist Settling Defendant in identifying appropriate officials and agencies to be notified.

A **Completion of RA Certification Report** shall be submitted by Settling Defendant within 30 days after the pre-certification inspection. In the report, a registered professional engineer and the Settling Defendant's Project Coordinator shall state the RA has been completed and operated in full satisfaction of the requirements of the CD, this SOW, the RD and the ROD. Review of this submittal shall be in accordance with Section IX of the CD (EPA approval of Plans and Other Submissions).

V. SUBMISSION AND ACTIVITY SCHEDULE

A summary of the reporting requirements contained in this SOW is presented below:

<u>Submission or Activity</u>	<u>Due Date</u>
1. Draft RAWP	Within 30 days after effective date of the CD
2. Revised RAWP	Thirty 30 days after receipt of EPA comments on the Draft RAWP
3. Pre-Construction Conference	Within 21 days after EPA approval of RAWP
4. Pre-Construction Conference Minutes	Within 14 days after Pre-Construction Conference
5. Completion of Pre-final Inspection	Within 30 days after completion of construction
6. Pre-final Inspection Report	Within 30 days after completion of pre-final inspection
7. Final Inspection	Within 30 days after completion of work identified in pre-final inspection report
8. Final Inspection Report	Within 14 days after completion of final inspection
9. RA Report	Within 30 days after completion of final inspection
10. Completion of RA Pre-certification Inspection	Within 90 following completion of O&M
11. Completion of RA Certification Report	Within 30 days after pre-certification inspection
12. Progress Reports	By 10th day of each month following the period addressed by the report
13. Notification of Sampling Activity	28 days prior to activity, unless otherwise agreed

VI. REFERENCE DOCUMENTS

"EPA Superfund Remedial Design and Remedial Action Guidance", Interim Final, US EPA, Office of Solid Waste and Emergency Response, OSWER Directive 9355.0-4A, June, 1986.

"EPA Oversight of Remedial Designs and Remedial Actions Performed by PRP", Office of Emergency and Remedial Response, EPA Publication No. 9355.5-01FS, February 1990.

"Scoping the Remedial Design", Draft, US EPA, Office of Solid Waste and Emergency Response, EPA Publication No. 9355.0-43, EPA/540/F-93/026, May, 1993.

"The Remedial Action Report - Documentation for Operable Unit Completion", US EPA, Office of Solid Waste and Emergency Response, EPA Publication No. 9355.0-39FS, June, 1992.

"Comprehensive Five-Year Review Guidance", OSWER Directive 9355.7-03B-P, dated June 2001.

"Use of Soil Cleanup Criteria in 40 CFR Part 192 as Remediation Goals for CERCLA Sites" February 12, 1998. OSWER Directive 9200.4-25, NTIS Order Number (PB97 963308), 6p.

"Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), EPA 402-R-97-016, December 1997.

"Quality in the Constructed Project: A Guideline for Owners, Designers and Constructors", American Society of Civil Engineers, 1990.

"Data Quality Objectives Process for Superfund", Interim Final Guidance, US EPA, Office of Solid Waste and Emergency Response, OSWER Publication No. 9355.9-01, EPA/540/R-93/071, September, 1993.

"Guidance for the Preparation of Standard Operating Procedures", EPA, QA/G-6.

"Data Quality Assessment: A Reviewers Guide", EPA, QA/G-9R.

"Data Quality Assessment: Statistical Tools for Practitioners", EPA, QA/G-9s.

"EPA Requirements for Quality Assurance Project Plans", EPA, QA/R-5.

"EPA Guidance for Quality Assurance Project Plans", EPA, QA/G-5.

"EPA Requirements for Quality Management Plans, EPA, QA/R-2.

"Specification and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs", ANSI/ASQ E4-2004.

"USEPA Contract Laboratory Program, Statement of Work Inorganic Analysis, ILM05.3.

“USEPA Contract Laboratory Program, Statement of Work Organic Analysis, SOM01.2.

"A Compendium of Superfund Field Operations Methods," Two Volumes, US EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9355.0-14, EPA/540/P-87/001, August, 1987.

"Community Relations In Superfund: A Handbook", US EPA, Office of Emergency and Remedial Response, EPA/540/R-92/009, January, 1992

"Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities", Interim Final Guidance, (OSW: 530-SW-89-026).